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FEDERAL - STATE - PRIVATE
COOPERATIVE SNOW SURVEYS
for
ALASKA

U. S. DEPARTMENT of AGRICULTURE , SOIL CONSERVATION SERVICE
and
ALASKA SOIL CONSERVATION DISTRICT

Data included in this report were obtained by the agencies named above in cooperation with the U.S. Army Corps of Engineers, Alaska Power Administration, U.S. Geological Survey, Alaska Highway Dept., Alaska Department of Fish and Game, University of Alaska, Greater Anchorage Area Borough and others.

AS OF
MAY 1, 1969

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80521
Idaho	P. O. Box 38, Boise, Idaho 83707
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



SNOW SURVEYS *for* ALASKA

Report Prepared by
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Issued By
BLAINE O. HALLIDAY, State Conservationist

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P.O. BOX F, PALMER, ALASKA

MAY 1969

Low elevation snow has melted in most areas of Alaska. Snow packs at higher levels in the interior of the state are also considerably reduced over last month but little runoff has resulted. This year many snow courses which normally have good snow cover on May 1 are either bare or have the lowest snow depth on record.

The watersheds of the Chena, Tanana, Susitna, Copper and 40 Mile Rivers were particularly short of snow. Spring and early summer streamflow in these areas is expected to be substantially below normal.

Storms in early and mid-April brought heavy snowfall to the Kenai Peninsula and portions of the mountains of S.E. Alaska. These areas have had somewhat greater than average snow cover throughout most of the winter.

Soils were very dry in interior Alaska and low elevation snow is being absorbed almost completely. Any major runoff from snow melt will come from the higher areas of the mountains and will not show up in the streams until late May or June.

YUKON above RAMPART

Snow cover throughout this large region was far below average all winter. Low elevation snow has melted and much of the water has been absorbed by the soil. Streamflow from snowmelt will be much less than average.

TANANA-CHENA DRAINAGE

Low elevation snow in this area has also melted producing only light runoff. Southern and eastern slopes of the hills in the Chena basin are bare up to two thousand feet. Snow cover still remains on the western and northern slopes but most of this is expected to be absorbed by the dry soils. Some streamflow in late May and June should be produced by the snow cover at the high elevations.

MATANUSKA-SUSITNA-COPPER

The May 1 snow depths and water equivalents measured at snow courses in this area are much less than either last year or the average of the past several years. Most stations have the lowest reading on record. Snowfall in the Alaska Range of mountains was particularly light throughout the winter. The snow course measured at Fielding Lake indicated water content of only 1.8 inches. The average for 8 years of measurement at this station is 12.7 inches. Streamflow from snowmelt will be much less than normal.

KUSKOKWIM

Snow surveys were not made in the Kuskokwim drainage area this month but earlier measurements indicate a light snowpack. Most of the low elevation snow cover has melted producing light runoff.

KOYUKUK

Snowfall in that area of the Brooks Range draining into the Koyukuk River system has been less than normal and only about a third of that measured last year. Runoff is expected to be light.

COASTAL DRAINAGE

Snow water equivalent measured at the upper reaches of the Ship Creek watershed indicate a substantial increase over last month. Low elevation snow has largely been melted with little resultant streamflow. Most of the snow courses in the Coastal Drainage near Anchorage had less than normal snow cover as of May 1.

SNETTISHAM DRAINAGE

This area in the Coast Range of mountains in S.E. Alaska has had a heavy snowpack most of the winter. May 1 measurements indicate a considerable loss of snow water during the past month. Maximum snow water accumulation is normally reached near the first of May but this year is an exception. Streamflow from snowmelt is expected to be earlier and greater than average.

ALASKA SNOW SURVEYS

DRAINAGE BASIN AND SNOW COURSE	MAP NO.	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT		PREVIOUS YEARS OF RECORD
					LAST YEAR	AVERAGE *	
YUKON Drainage: Log Cabin	69	4/30	38	9.8	7.5	11.6	11
TANANA-CHENA							
Yak Pasture	17	4/29	0	0.0	2.7	1.9	8
Cleary Summit	18	4/15A	21	4.8E	6.5	8.6	6
		4/28	18	4.6	7.2	7.0	8
Little Chena	19	4/15A	12	3.0E	4.8	5.4	7
		5/1	T	T	5.1	6.2	7
Mt. Ryan	20	4/15A	17	3.8E	5.9	8.5	7
		5/1	15	3.8	8.0	9.5	7
Chena Hot Springs	21	4/15A	12	3.0E	4.2	--	1
		5/1	2	.7	5.1	3.9	5
Big Windy	22	4/15A	14	3.9E	3.4	4.3	6
		5/1	17	5.3	4.4	4.4	6
Munson Ridge	23	4/15A	28	6.7E	11.4	15.4	7
		5/1	28	7.7	14.0	16.4	7
French Creek	24	4/28	3	0.8	6.9	8.3	7
Little Salcha	25	4/28	0	0.0	4.5	5.5	7
Wolf Creek	76	4/15	5	1.5E	6.0	--	1
		5/1A	5	1.5E	7.8	--	1
Upper Chena	75	4/15A	25	5.5E	8.5	--	1
		5/1	15	4.6	10.2	--	1
Colorado Creek	27	5/1	0	0.0	3.5	4.7	3
Caribou Mine	28	4/15A	10	2.4E	4.1	4.0	3
		5/1	T	T	3.4	5.1	3
Big Delta	29	4/28	0	0.0	0	0.0	8
Tok Junction	30	4/29	0	0.0	2.2	1.8	7
Mentasta Pass	31	4/29	T	T	6.1	6.3	7
Fielding Lake	33	4/28	8	1.8	14.2	12.7	8
Fort Greely	78	4/28	T	T	0	2.8	2
Meadows Road	79	4/28	0	0.0	0	2.0	2
Donnelly Dome	80	4/28	2	0.6	4.6	10.0	2
Granite Creek	81	4/28	0	0.0	1.7	--	1
Bonanza Creek	82	5/1	14	3.6	5.7	--	1
COPPER RIVER:							
Mankomen Lake	32	5/1	14	2.4	7.8	7.8	2
Haggard Creek	34	4/28	0	0.0	5.9	5.9	3
Sanford River	37	4/29	0	0.0	3.6	2.7	2
St. Anne's Lake	54	4/29	T	T	6.2	4.2	3
Little Nelchina	40	4/29A	19	4.2E	5.5	--	1
Worthington Glac.	55	5/3	30	10.6	25.2	21.2	11
MATANUSKA-SUSITNA:							
Monahan Flat	35	4/29	13	3.2	9.8	7.8	4
Clearwater Lake	36	4/29	T	T	4.9	4.2	4
Fog Lakes	38	4/29	0	0.0	5.8	4.1	4
Oshetna Lake	39	4/29	10	2.1	3.2	3.6	4
Lake Louise	41	4/29	0	0.0	4.5	4.0	4

(*) Average for Period of Record

A - Aerial marker reading

E - Estimated

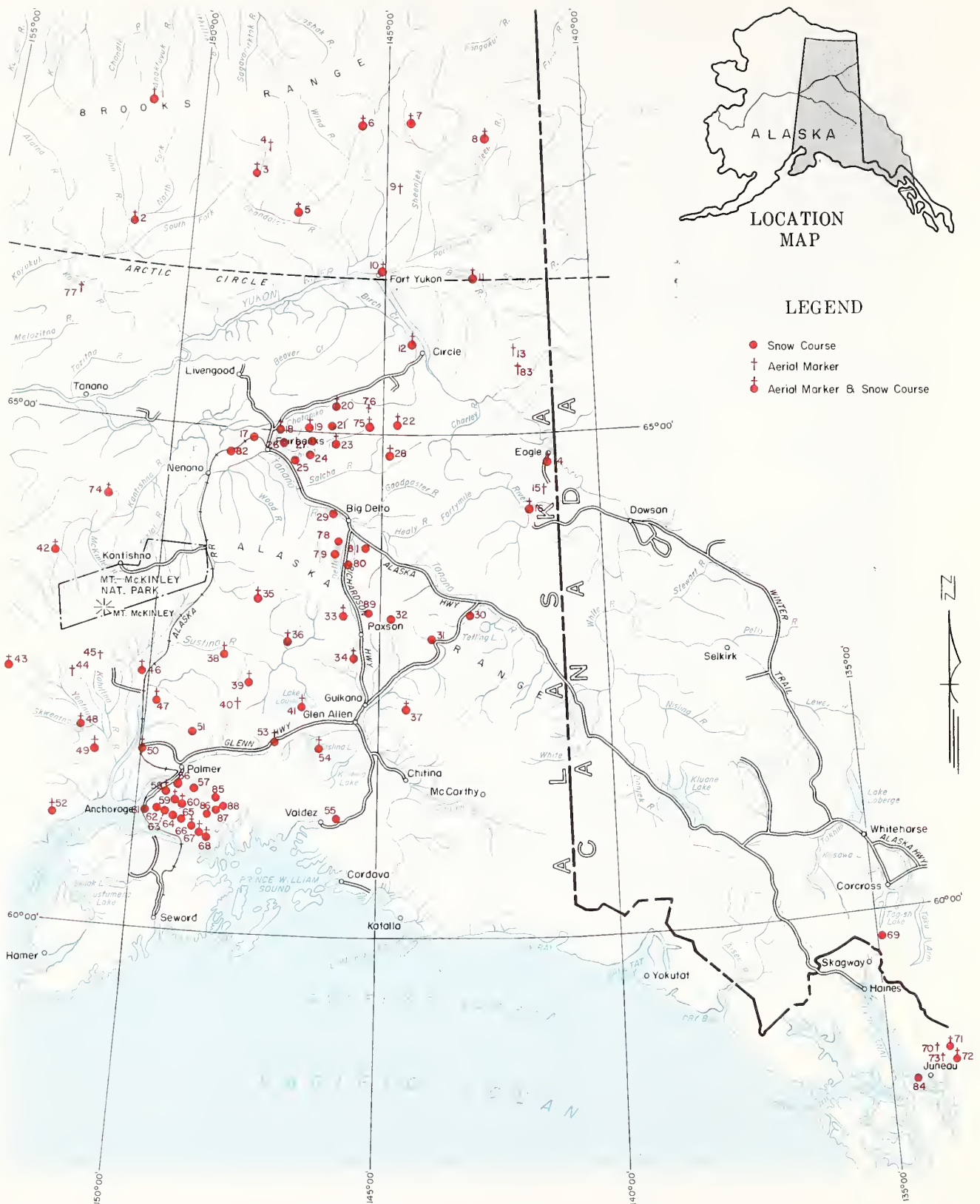
ALASKA SNOW SURVEYS

DRAINAGE BASIN AND SNOW COURSE	MAP NO.	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT		PREVIOUS YEARS OF RECORD
					LAST YEAR	AVERAGE *	
MATANUSKA-SUSITNA (Cont'd)							
Chelatna Lake	44	4/29A	27	7.8E	16.2	12.3	3
Peters Hills	45	4/29A	30	8.7E	16.2	--	1
Talkeetna	46	4/29	0	0.0	9.9	9.8	2
Bald Mtn. Lake	47	4/29A	13	3.2E	13.8	9.9	4
Skwentna	48	4/29	0	0.0	11.6	10.4	2
Alexander Lake	49	4/29A	6	1.8E	11.2	9.9	3
Willow Airstrip	50	4/29	0	0.0	0.0	2.6	4
Independence Mine	51	5/5	36	11.4	--	--	--
Sheep Mountain	53	5/3	0	0.0	4.2	3.2	11
COASTAL Drainage:							
McArthur	52	4/30A	32	11.2E	21.2	17.0	3
Moraine	56	No measurement			6.9	7.9	11
Ptarmigan	57	No measurement			9.8	10.2	10
Marmot	58	No measurement			--	--	--
Goat	59	No measurement			12.2	--	1
Grizzly	60	No measurement			--	--	--
Arctic Valley #1	61	4/30	0	0	0.0	0.0	4
Arctic Valley #2	62	4/30	0	0	0.0	0.0	4
Arctic Valley #3	63	4/30	7	1.7	4.1	4.0	4
Arctic Valley #4	64	4/30	2	0.6	4.1	4.3	4
Arctic Ski Bowl	65	4/30	30	10.4	12.5	13.1	4
Bird Creek	66	4/28	42	14.9	19.8	18.0	2
Ship Creek	67	4/28	24	7.2	10.0	9.7	2
Indian Pass	68	4/28	55	17.4	25.9	22.6	2
SOUTHEAST ALASKA:							
Upper Long Lake	70	5/1	85	40.3	36.1	42.6	4
Long Lake	71	5/1	83	36.8	39.8	47.0	4
Speel River	72	5/1	43	20.4	21.4	30.4	4
Crater Lake	73	5/1	148	77.0	43.2	65.4	4
Douglas Ski Bowl	84	4/27	87	38.8	32.2	--	1

A - Aerial marker reading

(*) Average for Period of Record

E - Estimated



INDEX OF ALASKA SNOW COURSES

MAP No.	COURSE NAME	COURSE No.	ELEV.	MAP No.	COURSE NAME	COURSE No.	ELEV.
1	Anaktuvuk Pass	51TT1A	2100	46	Talkeetna	50NN2	350
2	Bettles Field	51RR1A	640	47	Bald Mt. Lake	49NN1A	2150
3	Chandalar Lake	48SS1A	2040	48	Skwentna	51MM1A	158
4	Squaw Lake	48SS2a	2150	49	Alexander Lake	50MM1A	200
5	Venetie	46SS1A	610	50	Willow Airstrip	59MM2	150
6	Arctic Village	45TT1A	2300	51	Independence Mine	49MM7	3300
7	Koness Lake	44SS1A	1790	52	McArthur	51LL1A	120
8	Coleen River	42SS1A	1100	53	Sheep Mountain	45MM1	2700
9	Vundik Lake	43SS1a	950	54	St. Anne's Lake	46MM1A	1985
10	Fort Yukon	44RR1AM	425	55	Worthington Glacier	45MM2	2400
11	Black River	44RR1A	650	56	Moraine	48MM1	2100
12	Circle City	44QQ3A	600	57	Ptarmigan	48MM2	3000
13	Bull Lake	42QQ1a	810	58	Marmot	48MM8A	2000
14	Eagle Village	41PP1A	900	59	Goat	48MM7A	3200
15	Boundary	41PP3A	3300	60	Grizzly	48MM4A	5000
16	Chicken Airstrip	41PP2A	1650	61	Arctic Valley #1	49MM1	500
17	Yak Pasture	47PP1	540	62	Arctic Valley #2	49MM2	1000
18	Cleary Summit	47QQ1A	2230	63	Arctic Valley #3	49MM3	2030
19	Little Chena	46QQ2AP	2200	64	Arctic Valley #4	49MM4	2330
20	Mt. Ryan	46QQ1AP	2950	65	Arctic Ski Bowl	49MM5	3000
21	Chena Hot Springs	46QQ3	1250	66	Bird Creek	49MM6A	2350
22	Big Windy	44QQ2AP	3850	67	Ship Creek	49MM7AM	1750
23	Munson Ridge	46PP1AP	3100	68	Indian Pass	49MM8A	2350
24	French Creek	46PP2MP	2010	69	Log Cabin (B.C.)	35KK1	2880
25	Little Salcha	46PP3	1500	70	Upper Long Lake	33JJ2a	1000
26	Glenn Creek	47PP2	925	71	Long Lake	33JJ1A	1075
27	Colorado Creek	46PP4	750	72	Speel River	33JJ3A	275
28	Caribou Mine	45PP2A	1115	73	Crater Lake	33JJ4a	1750
29	Big Delta	45PP1	975	74	Wien Lake	55PP1A	1020
30	Tok Junction	43OO1	1650	75	Upper Chena	44QQ3AP	3000
31	Mentasta Pass	43NN1	2430	76	Wolf Creek	44QQ4a	3850
32	Mankomen Lake	44NN1	3050	77	Lake Todatonten	52RR1a	985
33	Fielding Lake	45OO1A	3000	78	Ft. Greely	45001	1420
34	Haggard Creek	45NN1A	2540	79	Meadows Road	45002	1570
35	Monahan Flat	47OO1A	2710	80	Donnelly Dome	45003	2200
36	Clearwater Lake	46NN1A	3100	81	Granite Creek	45004	1235
37	Sanford River	44NN2a	2280	82	Bonanza Creek	48PP1	1150
38	Fog Lakes	48NN1A	2270	83	Dempsey Creek	42QQ2a	950
39	Oshetna Lake	47NN1A	2950	84	Douglas Ski Bowl	34II1	1640
40	Little Nelchina	47NN2a	4160	85	Eagle Glacier	49MM9	4790
41	Lake Louise	46NN2A	2400	86	Wolverine Glacier #1	48LL1	2130
42	Lake Minchumina	52OO1A	730	87	Wolverine Glacier #2	48LL2	3610
43	Farewell Lake	53NN1A	1090	88	Wolverine Glacier #3	48LL3	4430
44	Chelatna Lake	51NN1a	1650	89	Gulkana Glacier	45002	5500
45	Peters Hills	50NN1a	2010				

Legend

45TT1	Snow Course Only
45TT1M	Snow Course & Soil Moisture
45TT1A	Snow Course & Aerial Marker
45TT1a	Aerial Marker Only
45TT1P	Snow Course & Precipitation Gage

UNITED STATES DEPARTMENT OF AGRICULTURE
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